

# Spring 2015 Water and Storm Water Pre-construction meeting

# WELCOME!



#### City of Rockford Public Works Department Water and Storm Water Pre-Construction Meeting March 20, 2015 9:00 a.m. City Yards Conference Room

- Staff Introduction Jamie Rott
- **Water Main Construction** 
  - a. Section 12 Jamie Rott
  - b. Illinois EPA Water Construction Permit Jamie Rott
  - c. Illinois EPA Water Operating Permit Jamie Rott
  - b. Water System Shutdowns Jamie Rott
  - c. Valve Operation Greg Cassaro
  - d. Tapping of Live Water Mains Greg Cassaro e. Service Connections Greg Cassaro

  - f. Inspection Greg Cassaro
  - g. Disinfection Nadine Miller
  - h. Sampling and Analysis Nadine Miller
- Hydrant Use Program: Jennifer Jackson
  - a. Permitting process
  - b. Meter rental
- **Development Marcy Leach** 
  - a. Traffic Control
  - b. Lighting Concerns
- Street Division Mark Stockman
  - a. Street Signs/Signals
  - b. Tree Trimming/Removal Permits
- 6. **Erosion and Sediment Control - Brad Holcomb**

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# Water Distribution System Design and **Specifications (Section 12)**



WATER DISTRIBUTION

SYSTEM DESIGN

AND

**SPECIFICATIONS** 

\*Current Version is available online at City Departments – Public Works - Water - Water Engineering



# Water Distribution System Design and Specifications (Section 12)

#### 12.02 Pressure Connections

Pressure connections or wet tap connections will not be permitted if the existing main is the same size or smaller than the proposed main that is to tee into the existing.

#### 12.5 Protection of Water Supplies

When it is impossible to accomplish the vertical separation required above, both the water main and the sewer must be constructed of water main materials and the sewer must be pressure tested for water tightness at the maximum expected surcharge head before backfilling. Wherever the water main is less than ten (10) feet from the sewer, a full twenty (20) foot length of water main pipe shall be centered at the point of sewer crossing. Rubber gasketed sewer will not be accepted as a water main quality material.

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# Water Distribution System Design and Specifications (Section 12)

#### <u>12.14 Fire Hydrants - Harrington Integral Hydrant Storz</u> Nozzle

All fire hydrants, public and private, shall have a Harrington Integral Hydrant Storz nozzle installed on hydrants during assembly and shall meet or exceed the requirements of AWWA C502 regarding material and pressure testing.





# Water Distribution System Design and Specifications (Section 12)

#### Hydrants and Valve Boxes

- Fire Hydrants (12.14)
  - nozzles and caps shall be lubricated immediately before or after installation
- Valve Boxes (12.16)
  - shall be Tyler/Union cast iron 6850 series with a debris cap and with an Adapter

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# Water Distribution System Design and Specifications (Section 12)

#### 12.31 Polyethylene Encasement of Water Main

- Poly Wrap required on ALL Projects
- Water main, <u>services (ductile iron only)</u> valves, fittings, hydrant barrels, and appurtenances, shall be fully encased
- Film shall be furnished in tube form
- Installed on the pipe prior to being lowered into the trench
- Overlap at all joints of one foot or more
- Overlap shall be secured in place with plastic adhesive tape wrapped
- Slack in the tubing film shall be folded over at the top of the pipe held in place with plastic adhesive tape applied at intervals of approximately three (3) feet along the pipe



## **Illinois EPA Water Construction Permit**





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## **Illinois EPA Water Construction Permit**

- 2 copies of the permit shall be submitted to the City Engineer
- New Development: A Subdivision Plat shall be approved prior to IEPA permit approval
  - Once the plat is approved, a copy of the plan shall be submitted to Engineering
- Prior to starting any water main construction the Contractor shall notify Engineering
- Prior to starting any water main construction the Public Water Supply Construction permit must be approved

# **Illinois EPA Water Operating Permit**

- The City of Rockford issues an Operating Permit once the water main has passed all tests and has been accepted by the Water Engineer.
- This permit is kept on file with the Public Works Department

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# Illinois EPA Water Operating Permit WATER MADE OF MATERIAL PROCESSOR WATER MADE OF MATERIAL PROCESSOR WATER MADE OF MATERIAL PROCESSOR \*\*\* Present Contract Present Contract Contract Contract \*\*\* Present Contract Contra

# **Water System Shutdowns**

#### Water Main Shut Off

- Section 1.6 Requirements for Scheduled Water Main Valve Shut Off
- Section 1.6.1 Requirements for Unscheduled (Emergency) Water Main Valve Shut Off

This section can be found on the City website under City Departments – Public Works – Water – Water Engineering

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# Water System Shutdowns

# <u>Section 1.6 - Requirements for Scheduled Water Main Valve Shut Off:</u>

- Must obtain permission of the Water Superintendent, or his designee, prior to any water main valve shut off.
- Meet with Water Division personnel at least five (5) days prior to start of construction
- Coordinate exercising valves and determining valve shut off patterns during construction.
- The shut down shall be allowed to proceed only after the Water Division representative has determined that the required valves are functioning.

# **Water System Shutdowns**

<u>Section 1.6 - Requirements for Scheduled Water Main</u> Valve Shut Off (Cont.):

- Minimum 24 hour notification to all customers of boil order (tags)
- For larger businesses, schools, etc. coordinate shutdown in advance with Property Owner and Project Manager

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# Water System Shutdowns

<u>Section 1.6 - Requirements for Scheduled Water Main Valve Shut Off</u> (Cont.):

- Notify the Water Division Operations Center (779-348-7368)
   prior to water main valve shut off and provide the following:
  - · Streets and boundaries of shut down
  - · Time of shut down
  - Approximate duration of shut down
  - · Number of customers affected
  - If non-residential customers (hospitals, nursing homes, restaurants, etc.) are affected, a count of how many individuals affected.
- Notify Water Division Operations Center Operator upon completion of repairs and restoration of water service.

# **Water System Shutdowns**

<u>Section 1.61 - Requirements for Unscheduled Water Main Valve Shut Off:</u>

 In the event the Contractor must perform an unscheduled water main valve shut off; the Contractor shall notify the Water Division Operations Center Operator (779-348-7368) as soon as possible.

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# Water System Shutdowns

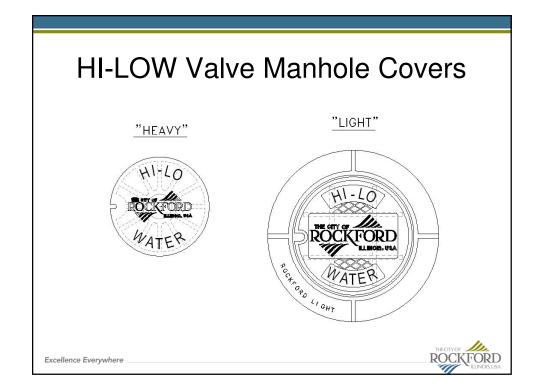
<u>Section 1.61 - Requirements for Unscheduled Water Main Valve Shut Off (cont.):</u>

- Notify Water Division Operations Center (779-348-7368) A.S.A.P.
- Notify all customers of boil order (tags)
- Provide the following:
  - Streets and boundaries of shut down
  - Time of shut down
  - Approximate duration of shut down
  - Number of customers affected
  - If non-residential customers (hospitals, restaurants, etc.) a count of how many individuals affected.
- Notify Water Division Operations Center Operator upon completion of repairs and restoration of water service.

# **Valve Operation**

- All valves inside the scope of work, shall be exercised and a condition assessment made by City of Rockford Distribution staff.
- If any line stops are used, a fall back valve on both sides of the line stop will be identified and the above criteria shall apply.
- In the event of a line stop failure, the fall back valves will be used and all unforeseen shutdown provisions will apply.
- The primary contact for Water Distribution will be Greg Cassaro (779) 537-3219.
- All Hi-Lo Valves are marked with a special manhole cover, and all operation of these valves shall be by City of Rockford staff <u>ONLY!</u>





# **Tapping of Live Water Mains**

- All taps performed on live water mains, must be completed by an Illinois licensed plumber and inspected by the City of Rockford Building Department.
- Anyone performing a live tap must notify Engineering

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## **Service Connections**

- Service taps are to be made only by the City of Rockford or upon approval from the Water Division for a licensed contract plumber to perform
- A crimping tool shall not be used to temporarily stop a water service
- Freezing of a service is the approved method of use for the City of Rockford
- All services boxes shall be placed at the property line



# **Horizontal Directional Boring**

- Installation shall be accomplished where required on the plans or in the Special Conditions
- Contractor responsible for repairs where underground pressure may cause heaving or damage to pavement and ground surfaces
- Contractor must submit boring/drilling pit locations to the Engineer for approval prior to beginning construction
- Installation shall be by a steerable drilling tool capable of installing continuous runs of pipe without intermediate pits
- Disposal of excess fluid and spoils shall be the responsibility of the Contractor

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# **Water Main Inspection**

- All requests will be coordinated by the project manager.
- All inspections will be performed by the City of Rockford or their designee.
- All Illinois EPA and Plumbing regulations shall apply for inspection purposes.
- All requests for inspections shall be no less than 24 hour advance notice.
- All Components needing inspections shall remain exposed until inspection is complete.



# **Disinfection**

# American Water Works Association (AWWA)

- C651 Water Main Disinfection
  - B300 Standard for Hypochlorite
  - B301 Standard for Liquid Chlorine

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# **Disinfection**

- Administrative Code Title 35; Section 602
- Administrative Code Title 35; Section 652
- City of Rockford Chapter II; Section 12
- Standard Specifications for Water & Sewer Main Construction in Illinois

Make sure the hydrant is sufficiently flushed to one ppm free chlorine before submitting your

BacT sample

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# **Bacteriological Sampling and Analysis**

The City of Rockford will perform <u>ALL</u> BacT analysis for City of Rockford construction projects.

- Sampling Requirements
  - <u>water main repair (no permit)</u>: 1 BacT sample P&A (presence& absence method)
  - <u>upsizing or relocation of main (needing a permit)</u>: 1 BacT sample - MF (membrane filtration method)
  - new construction (not routine & needing a permit): 1 BacT sample - MF ((membrane filtration method)

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## **Rockford Water Division Environmental Laboratory**

Location: 1111 Cedar Street

Hours of Operation: 8:00 am – 2:00 pm, Monday
 Thursday

• Bacteriological Analysis Pricing

Membrane filtration: \$18.00

Presence & Absence: \$13.00

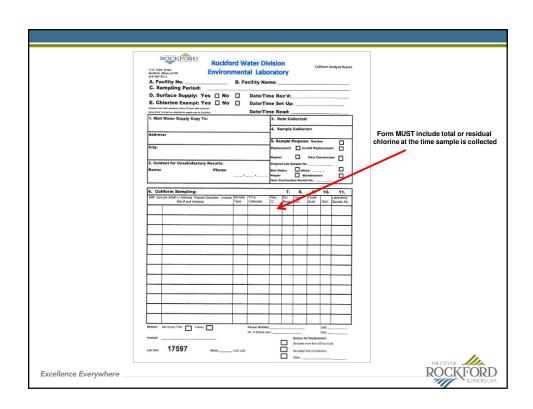


# **Environmental Laboratory**

- Samples will be submitted in laboratory approved containers that are available at 1111 Cedar Street
- Samples will not be accepted without properly completed paperwork







# Hydrant Permits & Hydrant Meter Requests

## Initial requests can be made:

On line <a href="http://www.rockfordil.gov/">http://www.rockfordil.gov/</a>

OR

By Phone (779) 348 -7152

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# What do we need?

- Information needed for Permit:
  - Contractor name, address, phone number
  - Hydrant Location- you are requesting
  - Project Name
  - Project Location
  - Project Purpose
  - Dates the hydrant is needed



# **Approval**

- All requests for hydrant use must be approved by Water Engineer and Water Quality Supervisor
- \*\*\* before you can pick up your meter and permits.\*\*\*
- Please Allow 24 Hours to process requests

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# **Approval**

The **Engineering** and **Water Quality Department** reviews your choice for the hydrant location request for the following:

- The meter size
- How long it will be used
- How it will affect the water main
- How it will affect possible traffic flow when filling a water tanker truck



# **PAYING FOR YOUR METER**

## Payment and Pick-up:

- Make your payment at City Hall 425 E. State St.
- When approval is made- we will contact you by phone for meter pick-up
- Bring your receipt to Water Operations building located at 1111 Cedar St.

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# What will it cost?

Costs: \$600.00 - 1 inch Meter

\$1000.00 - 2 inch Meter

- \$10.00 per month Hydrant use permit fee
- Water is billed \$4.93 per 100 cubic ft.
- Damage to meters is deducted from deposit



# **Bringing it Back**

• RETURNING YOUR METER:

#### **Bring To-**

· Water Operations building located at 1111 Cedar Street

#### **WE will**

- · Read the meter
- · Document your contract with the meter read
- · Check for any damages to the meter
- · Give you a signed copy as your receipt
- ALL CONTRACTS EXPIRE 12-31-15 -YOU MUST RETURN YOUR METER AND UPDATE YOUR FORMS FOR THE 2016 SEASON

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# TIPS FOR PROPER USE

#### <u>Do</u>

- Open/Close Hydrant slowly
- Use hydrant wrench provided
- Keep a copy of permit on-site
- Brace bottom of meter
- Store in warm place to avoid freezing
- Please report any problems to the Water division

#### Do not

- · Leave meter unattended
- Move to a different hydrantor use unless approved



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# **ILLEGAL USE OF HYDRANT**

Using a hydrant without authorization from the City of Rockford Engineer or Water Quality Dept. could result in a fine.

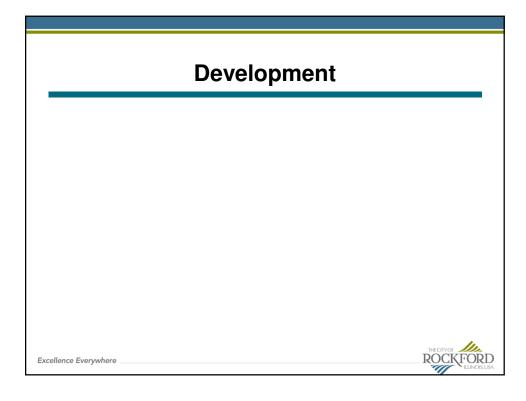
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# **Permits and Hydrants**

# **QUESTIONS?**





# Street Division Excellence Everywhere

### **Erosion and Sediment Control**

- NPDES Municipal Separate Storm Sewer System (MS4) Stormwater permits requires municipalities to implement an erosion and sediment control inspection and enforcement program.
- All projects within City of Rockford limits must comply with the City's Subdivision review process as well as the Public Works Department - Engineering Division's Plat and Plan Review Process. Construction shall not begin until the City has completed it's review process and has issued approvals.
  - For City projects, SWPPP's and erosion control plans must be reviewed by the Stormwater & Environmental Team
- All projects requiring an IEPA General Construction Permit (ILR10) must submit the Notice of Intent (NOI) and SWPPP with the IEPA a minimum of 30 days prior to starting construction. A fee is required along with the submittal. <a href="The City will not permit a project until it has been approved by IEPA">The City will not permit a project until it has been approved by IEPA</a>.
  - All City projects requiring a IEPA construction permit shall submit the NOI through the City's construction login page.
  - IEPA will not approve the permit without the SWPPP being electronically submitted.
  - City projects will also receive regulatory inspections and be inspected with same frequencies as private projects.
- City must be notified a minimum of 48 hours before grading to perform a pre-grading inspection.

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## **Erosion and Sediment Control**

#### Inspections

- > Unless requested all inspections are surprise visits. Appointments are not made.
- If work does not commence within 2 weeks of the start date on the Grading and Stormwater Discharge Application the permit is no longer valid until the City is informed of the new start date. Permit is valid for 2 years.
- > The City will inspect any size construction site regardless of IEPA permitting requirements.
- > Inspection Types:
  - Pre-Grading Inspection: BMP's must be installed <u>prior</u> to the start of construction except in areas where clearing and grubbing is necessary for installation.
  - Drive Through Inspections: A visual observation assessing site conditions and BMP's installations.
  - Full Erosion and Sediment Control Inspection: Complete review of SWPPP, inspection records, ESC plan and site conditions.





## **Erosion and Sediment Control**

- <u>WE EXPECT FULL COMPLIANCE AT THE TIME OF THE VISIT!</u>
- Compliance does not start when the regulatory inspector shows up.
- Follow the erosion control plan and the BMP's that were specified!
- Remove all BMP's when the project is completed!

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# **Erosion and Sediment Control**

#### **Discharge Point?**

- ➤ Is the outlet stabilized?
- > Are there indications of offsite discharges?
  - Sediment deposits
  - Sediment laden water
  - Downstream erosion
- > See Title 35 of the Illinois Pollution Control Board,
  - Offensive Conditions (Part 302.203)
  - Offensive Discharges (Part 304.106)







#### **Best Management Practices**

#### **Inlet Protection**

- > Do all inlets that received water from disturbed areas have protection?
- > Are there affected inlets without protection?
- > Is the inlet protection being maintained?







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# **Erosion and Sediment Control**

#### **Best Management Practices**

#### Perimeter Protection

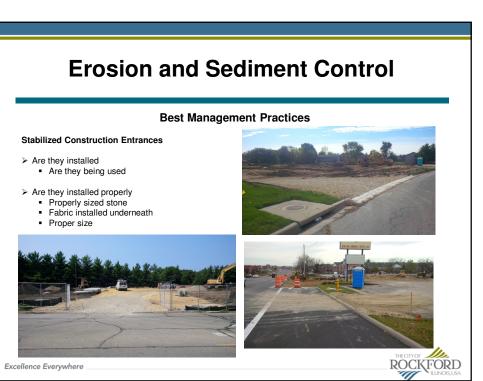
- > Is perimeter protection in place and functional
- ➤ Is it being maintained?
- > Was it installed prior to the start of grading?













# **Erosion and Sediment Control**

#### **Best Management Practices**

#### Stabilization

- > Are areas not under construction stabilized?
- > Is there adequate mulch cover until germination?







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# **Erosion and Sediment Control**

#### **Best Management Practices**

#### Concrete Washouts

- > Are washouts in place and being maintained?
- > Are there any inlets near the washout?
- > Improper concrete waste disposal is a violation of City codes as well as a federal clean water act violation.







# **Erosion and Sediment Control**

#### **Best Management Practices**

Other potential storm water contaminants

- > Poorly maintained/leaky equipment
- ➤ Port–A-John location
- > Fuel can/tank placement
- ➤ Trash & Debris









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# **Erosion and Sediment Control**

#### **Terminating Permits**

Where a site has completed final stabilization and all authorized stormwater discharges from construction activities are eliminated the permittee <u>MUST</u> submit a completed notice of termination.

- Final Stabilization All soil disturbing activities have been completed and:
   A uniform perennial vegetative cover with a density of 70% for the area has been established on all unpaved areas.

or
• Equivalent permanent stabilization measures (riprap, gabions, or geotextiles) have been employed.





# Development Inspections Sites & Subdivisions

- All projects shall have a Development Permit and Grading Permit prior to starting construction
- If work does not commence within 2 weeks of the listed start date on the Grading Permit then the permit is no longer valid until the City of Rockford is informed of the new start date. Permit is valid for two (2) years from date construction commences. Projects that extend beyond 2 years a new permit application and fee shall be submitted.

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# Development Inspections Sites & Subdivisions

- Prior to starting Grading work contact Brad Holcomb (815)967-7061
- Prior to starting Water work contact Jamie Rott (815)967-6742
- Prior to starting all other construction work contact Jason Irvin (815)721-1419
- Right-of-Way Questions or Concerns contact Warren Stahl (815)967-6945
- General Number (815) 987-5570



